

IN THE
UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor(s): Michael G. Monroe

Confirmation N .:

Application No.:

Examiner:

Filing Date: Herewith

Group Art Unit: Unkn.

Title: MEMS DEVICE AND METHOD OF FORMING MEMS DEVICE

Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

INFORMATION DISCLOSURE STATEMENT

Sir:

This Information Disclosure Statement is submitted:

- ☒ under 37 CFR 1.97(b), or
(Within three months of filing national application; or date of entry of national application; or before mailing date of first office action on the merits; whichever occurs last)
- ☐ under 37 CFR 1.97(c) together with either a:
☐ Statement under 37 CFR 1.97(e), or
☐ a \$180.00 fee under 37 CFR 1.17(p), or
(After the CFR 1.97 (b) time period, but before final action or notice of allowance, whichever occurs first)
- ☐ under 37 CFR 1.97 (d) together with a:
☐ Statement under 37 CFR 1.97(e)(1) or (2), and
☐ a \$180.00 fee set forth in 37 CFR 1.17(p).
(Filed after final action, a notice of allowance, on or before payment of the issue fee)

Please charge to Deposit Account **08-2025** the sum of \$0.00 . At any time during the pendency of this application, please charge any fees required or credit any overpayment to Deposit Account **08-2025** pursuant to 37 CFR 1.25.

☒ Applicant(s) submit herewith Form PTO 1449 - Information Disclosure Statement together with any required copies of patents, publications or other information of which applicant(s) are aware, which applicant(s) believe(s) may be material to the examination of this application and for which there may be a duty to disclose in accordance with 37 CFR 1.56.

☐ A concise explanation of the relevance of foreign language patents, foreign language publications and other foreign language information listed on PTO Form 1449, as presently understood by the individuals(s) designated in 37 CFR 1.56 (c) most knowledgeable about the content is given on the attached sheet, or where a foreign language patent is cited in a search report or other action by a foreign patent office in a counterpart foreign application, an English language version of the search report or action which indicates the degree of relevance found by the foreign office is listed on form PTO 1449 and is enclosed herewith.

It is requested that the information disclosed herein be made of record in this application.

"Express Mail" label no. **EV310988159US**

Date of Deposit **Oct. 2, 2003**

I hereby certify that this is being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 CFR 1.10 on the date indicated above and is addressed to: Commissioner for Patents, Alexandria, VA 22313-1450.

By

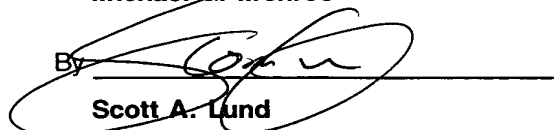


Typed Name: **John A. Parker**

Respectfully submitted,

Michael G. Monroe

By



Scott A. Lund

Attorney/Agent for Applicant(s)

Reg. No. **41,166**

Date: **Oct. 2, 2003**

PATENT APPLICATION

Sheet 1 of 2

FORM PTO-1449 LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT (Use several sheets if necessary)	ATTY. DOCKET NO. 200312474-1	APPLICATION NO.	CONFIRMATION NO.
APPLICANT Michael Monroe t al.			
FILING DATE Herewith		GROUP Unkn.	

REFERENCE DESIGNATION U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	PUBLICATION DATE	NAME	Pages, Columns, Lines Where Relevant Passages or Figures Appear
	1A	5,583,688	12/1996	Hornbeck	
	1B	5,650,881	07/1997	Hornbeck	
	1C	5,919,548	07/1999	Barron et al.	
	1D	6,025,951	02/2000	Swart et al.	
	1E	6,121,552	09/2000	Brosnihan et al.	
	1F	6,396,368	05/2002	Chow et al.	
	1G	6,440,766	08/2002	Clark	
	1H	6,469,330	10/2002	Vigna et al.	
	1I	6,480,320	11/2002	Nasiri	
	1J	6,523,961	02/2003	Ilkov et al.	
	1K	20020039470	04/2002	Braun et al.	

FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	PUBLICATION DATE	NAME OF PATENTEE OR APPLICANT	Pages/Columns/Lines Where Relevant Passages/Figures Appear	Check if Translation attached
	1L	EP1093143	04/2001	Lucent Tech Inc.		
	1M	JP2000314634	07/2001	Lucent Tech Inc.		
	1N					
	1O					
	1P					

OTHER REFERENCES (including Author, Title, Date, Pertinent Pages, etc.)

	1Q	J.H. Smith et al., "Material and Processing Issues for the Monolithic Integration of Microelectronics with Surface-Micromachined Polysilicon Sensors and Actuators" SPIE, October 1995, Pages 1-10.
	1R	Oliver Brand, "CMOS-based MEMS/DTU PhD Course/Topics in Microelectronics", Physical Electronics Laboratory, ETH Zurich, http://www.iqe.ethz.ch/pel , slides A-2 through A-36.
	1S	J.H. Smith et al., "Embedded Micromechanical Devices for the Monolithic Integration of MEMS with CMOS", 1995 IEEE, Pages 609-612.

EXAMINER

DATE CONSIDERED

PATENT APPLICATION

Sheet 2 of 2

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REFERENCE DESIGNATION U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	PUBLICATION DATE	NAME	Pages, Columns, Lines Where Relevant Passages or Figures Appear
	2A	20030034535	02/2003	Barenburg et al.	
	2B	5,485,304	01/1996	Kaeriyama	
	2C	5,631,782	05/1997	Smith et al.	
	2D	5,646,768	07/1997	Kaeriyama	
	2E	5,703,728	12/1997	Smith et al.	
	2F	6,038,056	03/2000	Florence et al.	
	2G	6,323,982	11/2001	Hornbeck	
	2H				
	2I				
	2J				
	2K				

FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	PUBLICATION DATE	NAME OF PATENTEE OR APPLICANT	Pages/Columns/Lines Where Relevant Passages/Figures Appear	Check if Translation attached
	2L					
	2M					
	2N					
	2O					
	2P					

OTHER REFERENCES (including Author, Title, Date, Pertinent Pages, etc.)

2Q	Bikram Baidaya et al., "Layout Verification and Correction of CMOS-MEMS Layouts", Carnegie Mellon University, Pittsburgh.
2R	Jeffrey D. Zahn et al., "A Direct Plasma Etch Approach to High Aspect Ratio Polymer Micromachining With Applications in Biomems and CMOS-MEMS, 2002 IEEE, pgs. 137-140.
2S	Jim Hunter et al., "CMOS friendly MEMS manufacturing process", 1998 IEEE, pgs. 103-104.
EXAMINER	DATE CONSIDERED